

## **REMARKS**

### **STATUS OF APPLICATION**

In accordance with the foregoing, claims 1, 4, 7, 8, and 10-15 have been amended. Claims 1-15 are pending and under consideration. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-15 are pending and under consideration. Reconsideration is respectfully requested.

### **REJECTION UNDER 35 U.S.C. §102(b)**

In the Office Action at page 2, claims 1-15 were rejected under 35 U.S.C. §102(b) as being anticipated by Japanese Patent No. JP2001-164279 in view of evidentiary reference "Fomblin Z Derivatives" Product Data Sheet by Solvay Solexis, Inc. This rejection is traversed and reconsideration is respectfully requested.

Independent claim 1 is directed to a method to refine a lubricant comprising a compound having a perfluoropolyether structure. Independent claim 1, as amended, recites "introducing a raw material of the lubricant into a pressure vessel having an inlet part and an outlet part", "contacting the raw material of the lubricant with a supercritical carbon dioxide under a predetermined condition in the pressure vessel to extract perfluoropolyether compounds for removing ionic impurities, wherein the supercritical carbon dioxide is introduced from the inlet part and flows through the pressure vessel at a predetermined rate", and "recovering the lubricant, from which ionic impurities are removed, through the outlet part".

Independent claims 10 and 13 correspond generally to independent claim 1 and recite similar features in a product and a magnetic recording medium, respectively.

Independent claim 4 is directed to a method to refine a lubricant comprising a compound having a perfluoropolyether structure. Independent claim 4, as amended, recites "introducing a raw material of the lubricant into a pressure vessel having an inlet part and an outlet part", "contacting the raw material of lubricant with a supercritical carbon dioxide under a predetermined condition in the pressure vessel to extract and remove a perfluoropolyether compound having a terminal group of weak polarity, wherein the supercritical carbon dioxide is introduced from the inlet part and flows through the pressure vessel at a predetermined rate", and "recovering the lubricant, from which the perfluoropolyether compound having a terminal group of weak polarity is removed, from the pressure vessel".

Independent claims 11 and 15 correspond generally to independent claim 4 and recite similar features in a product and a magnetic recording medium, respectively.

Independent claim 7 is directed to a method to refine a lubricant comprising a compound having a perfluoropolyether structure. Independent claim 7, as amended, recites "introducing a raw material of the lubricant into a pressure vessel having an inlet part and an outlet part", "contacting the raw material of the lubricant with a supercritical carbon dioxide under a first condition in the pressure vessel to extract and remove a perfluoropolyether compound having a terminal group of weak polarity, wherein the supercritical carbon dioxide is introduced from the inlet part and flows through the pressure vessel at a predetermined rate", "contacting the remaining lubricant, from which the perfluoropolyether compound having a terminal group of weak polarity is removed, with the supercritical carbon dioxide under a second condition in the pressure vessel to extract perfluoropolyether compounds for removing ionic impurities, wherein the supercritical carbon dioxide is introduced from the inlet part and flows through the pressure vessel at a predetermined rate", and "recovering the lubricant, from which both the perfluoropolyether compound having a terminal group of weak polarity and ionic impurities are removed, from the pressure vessel."

Independent claims 12 and 14 correspond generally to independent claim 7 and recite similar features in a product and a magnetic recording medium, respectively.

Kazuaki is directed to a method for producing a fluorine-based lubricant for a magnetic recording medium. According to Kazuaki, "the functional group introduced fluorine-based lubricant is provided to a chromatography equipped with carbon dioxide in a supercritical state as a mobile phase and a silica gel as a stationary phase and separated into plural fractions and the fraction in which the introduced ratio of the functional group is high is selected from the obtained fractions" (Abstract). Specifically, the teachings of Kazuaki relate to column chromatography equipped with a silica gel as a stationary phase. See Abstract, Machine Translation of Detailed Description at paragraphs [0016]-[0017].

The independent claims of the present invention, in contrast, recite "introducing a raw material of the lubricant into a pressure vessel having an inlet part and an outlet part", and contacting the raw material of the lubricant with a supercritical carbon dioxide under one or more predetermined conditions in the pressure vessel, and "recovering the lubricant ... from the pressure vessel." Applicants respectfully submit that Kazuaki fails to teach or suggest these features of independent claims 1, 4, 7, and 10-15.

For at least these reasons, Applicants respectfully submit that independent claims 1, 4, 7, and 10-15, and those claims depending directly or indirectly therefrom, patentably distinguish over the prior art and are in condition for allowance.

## DOUBLE PATENTING REJECTION

In the Office Action at page 5, claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6,911,420. As the conflicting application is commonly owned, a Terminal Disclaimer is submitted herewith to overcome this non-statutory double patenting rejection.

## CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

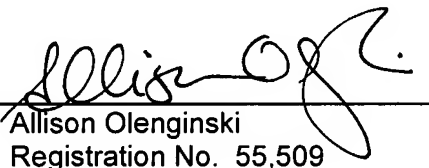
Respectfully submitted,

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